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SEQUENCING OF ECONOMIC REFORMS IN THE PRESENCE OF POLITICAL CONSTRAINTS

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Several prestigious economists, such as Guillermo Calvo, Vittorio Corbo, Sebastian Edwards, Stanley Fischer, Jacob Frenkel, Arnold Harberger, Anne Krueger, and Ronald McKinnon have argued for sequencing market-oriented reforms (such as macroeconomic stabilization and trade liberalization) in a particular order. Several countries, such as Argentine, Bolivia, Ghana, Mexico, Poland, and Peru have implemented all types of reforms simultaneously (seemingly ignoring the economists' advice) and have paid a price in terms of unemployment and balance of payment problems (as predicted by the economists).

There are two classes of explanations for the seeming failure to follow the best of economic advice. The "mistakes" hypothesis would say that policymakers wrongly ignored this advice (or that they did the right thing and the advice was wrong). In this paper we explore the alternative explanation that policymakers face political constraints that force big bang reforms as the best *feasible* strategy.

The model portrays the case of a country in a political deadlock about reform proposals that hurt strongly organized interests. In such cases, under democratic conditions, and without precommitment, only far-reaching reforms (even if quite costly) have hope of success.

The more general message is that once we incorporate political sustainability restrictions into the analysis, the optimal course of action may be different from the one we would infer from an "unconstrained" economic perspective.

An understanding or the conditions under which political considerations induce biases toward radical reform is important to evaluate recent experiences in Latin America and in terms of the design of new reform programs.

From a **positive point of view**, we provide an explanation for why Latin American countries that failed when implementing gradualist reforms in the early 1980s, have been relatively successful later in undertaking more comprehensive attempts at reform. These attempts were somewhat surprising to outside economic analysts given the increased economic and administrative costs of such attempts in relation to more paused reform processes. A key element seems to have been the building of political support through a wider scope of reform packages. Thus, reform has been usually accompanied by political realignment. Since no sector of society wants to be first in renouncing to its appointment of special privileges, reformist governments felt necessary to cut through the Gordian knot of government-created rents.

From a normative point of view, our main insight is that even in circumstances in which economic reasoning indicates that reforms should be made sequentially, political considerations can make them "complementary". In implementing reform programs, policymakers have to be very aware of those considerations. This result stands in contrast to Rodrik's (19891 recommendations of undertaking deep reforms with a narrow scope. On the other hand, we agree with Roger Douglas's (1990) reflections on the principles of politically successful structural reform, inspired by his experience as New Zealand's Finance Minister: "Large packages provide the flexibility to ensure that losses suffered by any one group are offset by gains by the same group in other areas [...] It is uncertainty, not speed, that endangers structural reform programs." With respect to the role of international agencies promoting the use of markets in developing countries, it is clear that these agencies should carefully assess political restrictions when assisting countries undertaking liberalization processes. Optimistically, these institutions as well as international treaties might play a role as commitment devices to permit the implementation of reforms with lower transition costs.

Sequencing of Economic Reforms in the Presence of Political Constraints

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Abstract

In recent experiences of economic reform in Eastern Europe and Latin America, comprehensive and swift introduction of reforms seems to have lead to (presumably) larger than necessary adjustment costs. We purport to explain these observations within a political-economic framework. Once we incorporate political sustainability restrictions into the problem, the optimal course of action may very well be different from the one we would infer from an "unconstrained" economic perspective.

Our model portrays the case of a country in a political deadlock about reform proposals that hurt strongly organized interests. We predict that, in such cases, under democratic conditions, only far reaching reforms accompanied **by** major political realignments have hope of success.

1. Introduction

In recent years, a number of countries in Eastern Europe and Latin America have embraced a wide range of market-oriented reforms, sometimes during macroeco-

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nomic crisis of unprecedented proportions. Some examples are the Bolivian package of 1985, and the Polish Balcerowicz plan, the Menem reforms in Argentina, the Plano Collor in Brazil, and the Fujimori reforms in Peru, all in 1990. (Comprehensive attempts at reform have also being pursued in Mexico and Venezuela, and, following Poland, throughout Eastern Europe, with **mixed results.)**

The radicalism of these programs stands in striking contrast with the recommendations of the economic literature on timing and sequencing of reforms. While there is no consensus on the optimal ordering of reforms, many (maybe most) authors agree in the need of a carefully phased gradualist approach to minimize the cost of transition. For instance, it is typically stated that measures oriented to restore state solvency and insure macroeconomic stabilization should precede full liberalization.

The strategy followed in the cases mentioned has been, instead, to introduce reforms as swiftly as possible. Such "bitter pill" reform strategies have indeed been painful, seemingly giving the reason to those advocating a more paused stance. The question posed by these experiences is, in Rodrik's (1992) **words:** "If a period of macro instability is the worst time to undertake a trade reform, why are so many countries doing it?" More generally, why do countries attempt to initiate all sort of reforms simultaneously? We believe the answer to this question lies in the presence of political constraints motivating governments to go for comprehensiveness and speed in implementing reforms, even when this strategy entails some additional costs.

Section 2 of this paper reviews the arguments in favor of gradualism. Most of the literature assumes that the objective of a reforming government is to maximize social welfare. This suggests a first best strategy of removing all existing distortions simultaneously. Hence, arguments in favor of gradualism follow the **logic of second-best: Given a distortion that cannot be removed, reform cannot** simply consist in getting rid of all other distortions simultaneously. More recently, some authors have pointed out the existence of externalities arising during the adjustment process itself. In the presence of those externalities, the private sector cannot be trusted to choose the socially optimal pace of adjustment to the new conditions if all preexisting distortions are removed at once. This provides a more powerful formal argument in favor of gradualism to the extent that it does not rely on imposing rigidities which are posited, not derived.

Political-economic objections to gradualism have been related to credibility problems or to political sustainability problems of step-by-step strategies. In section 3 we provide an argument against gradualism based on the distributive consequences of reform. By widening the scope of efficiency improving reforms, the government is more likely to gain the support of larger segments of the population, particularly if the losers of each particular measure are benefited by other measures. If the government needs to pass a threshold of popular support at each step, a gradual process risks being stopped at each stage by the group being hurt at that point. Hence, the government may need to implement all reforms simultaneously even if this entails some aggregate costs. Credibility and political sustainability are clearly intertwined. We proceed to show the validity of the argument in a simple general equilibrium model in which there are externalities in the adjustment process.

Section 4 presents some (anecdotal) evidence on the fact that wide-scope reforms have indeed been implemented, with initial political success, in spite of the severe economic difficulties expected (and encountered). Section 5 contains some concluding remarks.

2. The literature on gradualism

The early literature on timing and sequencing of economic reforms was spurred by the experience of the Southern Cone of Latin America in the late 1970s and early 1980s. The attempted liberalizations under military rule in Chile, Argentina, and Uruguay led to a series of bank panics and financial collapses. These difficulties were soon interpreted as due to mistakes in the order of liberalization (Diaz Alejandro 1985, Corbo and de Melo 1985, and Edwards and Edwards 1987.) The need to balance the central government finances before undertaking other reforms, was commonly emphasized. The debate centered on the order of liberalization of the trade and capital accounts, with the majority of authors favoring the opening of the former before the liberalization of the latter in order to avoid undesirable capital flows. (See, e.g., McKinnon 1991. For a dissenting view, see Lal 1987).

Most of the early literature was informal; the emphasis was in giving policy advice to avoid the difficulties that plagued efforts at economic reform in Latin America. Subsequent research has been more precise in making statements about welfare gains or losses associated with different sequences (Edwards 1992).

Clearly, under frictionless competitive equilibrium assumptions, welfare maximization is obtained by removing all distortions simultaneously. As long as the perceived private costs and benefits correspond to the true social costs and benefits, private economic agents will chose the socially correct pace of adjustment following a full scale liberalization.[1] "Radical reform" is the *first* best reform strategy, argued Mussa (1982) early on in the debate about gradualism. Hence, arguments for gradualism must rely on the presence of distortions during the adjustment process.

One possible argument for gradualism is the presence of preexisting distortions in one or several markets that can not be removed at the time the reform plan is announced. Potential candidates are labor market interventions, domestic capital market imperfections, and limits to foreign indebtedness that are not perceived as binding by individual - private - agents (See, for instance, Edwards and Van Wijnberger 1986 and Edwards 1992). In all of these cases, one can imagine circumstances in which the second best reform strategy will involve some degree of gradualism, for instance, in the speed of trade liberalization.

A related argument, put forward by Calvo (1989), emphasizes the equivalence of imperfect credibility to an intertemporal distortion. In one of Calvo's examples, if the public wrongly believes that a trade liberalization will be reverted in the future, quantitative control of the capital account may be called for. The problem with this type of argument is that, in its simplest form, it assumes that credibility problems arise because the government "knows better" than the public what is going to happen in the future. A closer look at the source of the credibility problem is necessary to assess the right policy response. For instance, if imperfect credibility arises because the public is unsure about the "true preferences" of the government, overshooting can act as a signaling device (Rodrik 1989a). Or, as argued in the next section, if credibility problems are related to political sustainability of the reforms, a big bang can be the only way of cutting through the Gordian knot of implicit rents generated by government interventions.

More recently, Gavin (1993) has focused on inefficiencies inherent in the adjustment process itself. The private sector response to reform may be suboptimal (too fast) if there is a congestion externality in the form of a limited capacity of absorption in the labor market. A related problem is the absence or precariousness of a "safety net" to smooth the effects of massive redundancies of labor during the process of economic transformation. This safety net is to be understood as a public good needed to reduce costs such as losses of human capital. Both Latin American and Eastern European countries have had fragmentary and rudimentary systems for income maintenance and welfare delivery (Przeworski 1991).

[1] It is important to make the distinction between economic reform and economic restructuring. In economies that have been highly distorted, economic restructuring is certain to take a long time, even if economic reform (a collection of policy decisions) occurs all of a sudden.

A similar "capacity constraint" is given by the limited availability of loyal and qualified technocrats to carry on the process of reforms. Capacity constraints of the economic team can be important in some cases, as in the process of privatization, where some "learning by doing" is likely to occur. This argument, however, can be reverted by noticing that when relatively few technocrats are available the possibility of carrying on successfully a fine-tuning gradualist reform process is significantly reduced. According to Krueger (1992), the most sensible procedure, given the limitations of the economic team, is to emphasize the swift removal of distortions that get in the wheels of the creation of new sources of income instead of focusing in the disposal of old public assets. Other authors such as Murrell (1992) argue in favor of gradualism on the basis of an evolutionary approach that emphasizes that rapid reforms that disrupt existing relationships also destroy existing information stocks

In sum, economic arguments in favor of gradualism are of a second-best nature. In a way, the most seriously microfounded argument is the one that emphasizes the existence of externalities inherent to the transition period. In the next section we will argue that, even in cases where this argument applies, a big-bang may still be the best feasible policy given political constraints.

3. The political economy case for radical reform

Radical reforms can be costly, particularly if the urgency for "getting things done" leads to the adoption of bad designs. Comprehensive reform packages, however, not only have been adopted by a number of countries but they have also enjoyed considerable initial support. For an explanation, we turn now to political-economic arguments .

Rodrik (1989a) has argued that overshooting a reform may be useful for a government that wants to signal its seriousness to a jaded public that has lived through too many failed reforms. This reasoning is compelling, although we believe that, when they are not due to plain policy inconsistencies, credibility problems are linked to political sustainability of economic policies.[2] Countries adopting radical reforms have been characterized, for the most, by weak states, vulnerable to pressures from large firms and organized interests. In these circumstances, policy actions with distributive consequences can be effectively blocked by the

[2] In a paper that takes precisely this point of view, Van Wijnbergen (1992) argues against gradualism in the removal of price controls, on the grounds that resulting hoarding can lead the median voter to underestimate the efficiency benefits from the reform.

groups being hurt. Lal (1987) and Krueger (1992) have emphasized the need for speed in the transition: A longer transition enables pressure groups to organize and successfully oppose the reforms.

To this reasoning in favor of speed in the process of reforms, it is possible to add one in favor of comprehensiveness. By widening the scope of efficiency-improving reforms initiated simultaneously, the government is more likely to gain the support of larger segments of the population. For many agents, losses from one reform can be more than compensated by gains from the others. Hence, linking the **fate** of the reforms can be a way of weakening the opposition to them.[3] That is to say, if the government is not able to credibly commit to a certain course of action, it may need to implement all reforms simultaneously, even when economic reasoning calls for a second-best gradualist approach. Even if high, the costs involved in a radical reform can be smaller than the costs involved in a truncated reform.

In 3.2, a simple general equilibrium example is sketched to illustrate how political-economic considerations can revert the second-best argument in favor of gradualism when there are congestion externalities in the process of adjustment. Before that, in 3.1, we use a sequential move game structure to show the logic of our argument in the most transparent way.

3.1. The argument

Consider a government trying to implement reforms F (for example, a fiscal reform needed to stabilize prices) and T (for example, a trade reform). Besides the government, there are two interest groups: f and t. Reform F, if carried alone, will hurt group f and will benefit group t. It is assumed that, on optimality grounds, reform T should be carried over after F is secure (An example could be a trade reform that needs macroeconomic stability to minimize transition costs).

If the gradualist approach is pursued, that is, if T is undertaken after F is completed, both f and t end up being better off than in the initial situation. However, group t would prefer the reform process to be truncated after reform F is accomplished.

Alternatively, the government can start both reforms simultaneously. The payoffs of following this radical approach are higher for f and t than those from the initial situation, but lower than those obtained after a gradualist reform process.

[3]The same idea underlies the discussion about economic reform in Buchanan (1991). A slightly different version of the same argument is made by Rodrik (199213). He shows that an agenda setter may be able to sneak-in a reform with distributive consequences alongside one with across-the-board benefits by packaging the two together.

	Government	Group f	Group t
Status quo	0	0	0
Truncated reform	1	-1	3
Gradualist reform	2	2	2
Radical reform	1	1	1

Table 3.1: FINAL Payoffs to the different groups

The government is modeled as an *agenda-setter* who holds the initiative to offer reform plans at several points in time.[4] For simplicity, the example assumes a utilitarian government, that is, a government interested in maximizing the sum of the utilities of the groups. The same results, however, can be obtained from a number of specifications of the government's objective. A predator government that takes a percentage of the total pie is also consistent with the payoff specification.

Pressure groups have no capacity to articulate counterproposals, but can effectively veto any reform plan. In deciding a sequence of proposals, the government must take into account not only economic considerations (the payoffs associated with the final point) but also the possibility of pulling off the reforms. Neither the government nor the different interest groups have the capacity to precommit their actions.

Figure 1 shows schematically the extended form of this game. For illustration purposes, we have chosen the payoff structure presented in Table 3.1.

These payoffs reflect the following assumptions: 1) There is a need for reform (low payoff of status quo); 2) If feasible, a gradual reform is preferable to a radical reform due to its lower costs; and 3) A partial or truncated reform will favor one group and hurt the other.

The government has three choices at the initial node: proposing a gradual path (starting by reforming sector F), doing nothing, or proposing a big-bang. If the government makes a proposal, the groups can accept or reject it. The opposition of any group is enough to paralyze the government's proposal. This may sound as a little too strong, but notice that in this example any majority rule will give the- same result if each group has 50% of the vote. Also, the (fragile) nature of political systems in developing countries tends to induce status quo biases.[5]

[4]See Romer and Rosenthal (1979) for a discussion of the agenda setter game, and Dewatripont and Roland (1992) for another application to the problem of economic reform.

[5]See Fernandez and Rodrik (1991) for a theoretical explanation. Burgess and Stern (1993)

Imagine for a moment that the government proposes F and that this is accepted by both groups. When T is proposed in the next period, group t will veto, since it prefers 3 over 2. Knowing that this path will lead to a payoff of -1, group f will veto the original proposal. Hence, gradual reform is not a subgame perfect equilibrium (A subgame perfect equilibrium requires rational choice by every decision maker at every node). The government, understanding that a gradual reform is not feasible, will propose a radical reform, which will be accepted by both groups, constituting the unique perfect equilibrium to this game. Hence, even though gradualism is preferred to the radical reform outcome by everybody, it is not going to be proposed. Notice that if group t could commit to accepting the second stage proposal, everybody would be better off. In this sense, the problem is analogous to well known time consistency problems in games between the government and a unified general public.

For simplicity, the strategy of starting reform T before reform F has been ignored. This strategy could also be credible for certain payoff structures. That is, political considerations could lead to a reversal of the economically optimal reform path. The more general message we are trying to convey is that the introduction of political feasibility considerations may revert "technocratic" economic prescriptions. Of course, if the government had the power (and will) to change the rules of the game in order to make other outcomes feasible, that would be the recommended course of action.

In the next subsection we construct a simple example to show that payoff structures as those assumed in Table 3.1 can be obtained in a general equilibrium setting where congestion externalities would call for a gradualist path in the absence of political considerations.

3.2. A general equilibrium model

The message of this paper is that political-economic considerations may lead to (constrained) optimal policies which are different from the "just-economics" opti-

conclude in their study of tax reform in a broad sample of countries – that "reforms facing strong and active opposition cannot be imposed upon countries. For government commitment to tax reform to be credible, the likely behavior of potential gainers and losers needs to be taken into account and a broad concensus arrived at. Francisco Gil Diaz (the head of Mexican tax reform) atributes much of the success to the ability of the Secretary of the Treasury to align different interest groups, and views obtaining approval of the groups as the most difficult part of the reform." (Burgess and Stern, p. 802). Remember also that in many of these countries, discontent from some groups is enough to make administrations fall (see Ames 1987).

mum. In particular, it seems that several countries implemented "shock" therapy in situations where outside analysts would have recommended gradual adjustments. In this section we present a model in which "just-economics" suggests a gradual removal of distortions. We then show that under some conditions such gradual strategy is not politically sustainable, while a shock therapy is the best *feasible* policy.

There are several economic environments that could possibly lead to "gradualism" being the economic optimum. We choose to follow the formulation of Gavin (1993) since it explicitly considers unemployment as the cost of radical reform. This agrees with the facts we describe in section 4, and with common perceptions (see, e.g., Przeworski 1993). Gavin argues in favor of gradualism on the grounds that there could exist a congestion externality in the form of a limited capacity of absorption in the labor market. Intuitively, unemployment is generated because contracting sectors shrink faster than expanding sectors can grow. In such a case, gradualism has beneficial income distributional, as well as efficiency properties, because it improves welfare of the unemployed, who are necessarily the least advantaged social group in the model.

Description of the Environment.

Consider a three-period economy with two sectors, each producing a distinct good, X (exports) or Y (importables), using one factor of production (L). There are three different types of agents in this economy: Workers, who supply labor, owners of the export firms, and owners of the importable firms. The exchange rate and the international prices of exports and importables are equal to one; agents in this economy only consume importables. In the initial situation, there is a tariff τ on imports and a fraction L_b of the labor force is absorbed by a useless bureaucracy (this extreme assumption is made for simplicity, to capture the realistic problem of overemployment and low productivity in the public sector in these countries). Time is indexed by $t = 0, 1, 2$.

The technology for producing exports and the technology for producing importables are given by:

$$X_t = L_{x,t}^{1/2}$$
$$Y_t = L_{y,t}^{1/2} \tag{3.1}$$

where X_t and Y_t are, respectively, the production of exports and the production of importables at time t, and $L_{x,t}$ and $L_{y,t}$ are employment in the export and importable sectors respectively. It will be assumed that firms are restricted in their decisions to increase their use of labor, in such a way that

$$L_{j,t} \in [0, L_{j,t-1} + K]; \quad j = X, Y \tag{3.2}$$

This assumption provides a simple way of reducing to our three-period framework the assumption of the escape rate from unemployment being declining in unemployment, used by Gavin (1993) and others. Gavin (p.8) justifies the assumption on the basis of empirical evidence for the U.S. (Blanchard and Diamond 1990) and Czechoslovakia (Burda 1992). We could rationalize (3.2) as saying that firms have a limited capacity to train new workers each period, or that the rate of creation of new jobs is greater than that of destruction of old ones. The results of the analysis will go through if we assume instead that there is some convexity in the cost of training new workers.

Time 0 is taken to be the pre-existing (distorted) situation, with $w_{x,0} = w_{y,0} = w_{b,0}$, and no unemployment. The action transpires over periods 1 and 2. At the beginning of each period, each worker has to decide whether to stay at his current job (sector) or whether to quit and search for employment elsewhere (it is not possible to look for employment in more than one sector, and once a worker quits, he cannot work in the same firm in that period.) Public employment L_b is treated as a policy variable. Let $S_{j,t}$ be the number of workers looking for a job in sector j at the begginning of period t. If the number of workers searching for employment in sector j exceeds the capacity of absorption of this sector $(S_{j,t} > K)$, then some of these workers will remain unemployed. More specifically, let min[$\frac{K}{S_{j,t}}$, 1] be the probability of finding a job in sector j at time t.

Production takes place after the match of (some of) the searching workers to firms. Firms are assumed to pay wages equal to the value of the marginal product of labor in the sector. That is,

$$\begin{aligned} w_{x,t} &= \tfrac{1}{2} L_{x,t}^{-1/2} \\ w_{y,t} &= (1 + \tau_t) \tfrac{1}{2} L_{y,t}^{-1/2} \end{aligned} \tag{3.3}$$

where τ_t is the level of tariffs at time t .[6]

[6]This sector-level behavior could be obtained by having n firms with technology $q_{i,t} = (l_{i,t}/n)^{1/2}$, with $l_{i,t} \in [0, l_{i,t-1} + k]$, and $K = nk$. Notice that the assumption of walrasian wage determination is not always compatible with the described matching environment. See Burdett, Mortensen and Wright (1993) for methods of price determination compatible with different. search and matching environments, and Aghion and Blanchard (1993) for an alternative wage determination mechanism. We conjecture that our argument goes through for alternative wage determination mechanisms. We maintain the assumption in the text for comparability with the literature, such as Gavin (1993), that showed gradualism as the best "economic" policy.

On the job, labor is supplied inelastically; the quantity of labor available in the economy is normalized to one. At the beginning of each period we have that:

$$\overline{L}_{x,t} + \overline{L}_{y,t} + L_{b,t} + S_{x,t} + S_{y,t} = 1 \tag{3.4}$$

where $\overline{L}_{x,t}$ and $\overline{L}_{y,t}$ are workers who remain employed in each sector from the previous period, $L_{b,t}$ are workers who remain employed in the bureaucracy, and $S_{x,t}$ and $S_{y,t}$ are workers searching for a job in each of the two productive sectors. After the (random) matching takes place, workers will be either employed in one of the two productive sectors, employed in the bureaucracy, or unemployed, so that

$$L_{x,t} + L_{y,t} + L_{b,t} + U_t = 1 \tag{3.5}$$

Workers' choices.

We assume all agents maximize the present value of real income, having a discount factor β. We proceed now to specify the value functions on the basis of which workers will make their search choices. At $t = 2$ (the final period), the value of searching for a job in sector j, $V_{j,2}$, will be given by the probability of getting a job in the sector multiplied by the wage expected in that sector. (The value of being unemployed during the final period is equal to zero):

$$\begin{aligned} V_{x,2} &= \min\{\tfrac{K}{S_{x,2}}, 1\} w_{x,2} \\ V_{y,2} &= \min\{\tfrac{K}{S_{y,2}}, 1\} w_{y,2} \end{aligned} \tag{3.6}$$

Notice that we assume, following the literature, perfect foresight. (Even though the decision to look for a job in a given sector is made at the beginning of the period, the wage that will result each period is supposed to be correctly anticipated). There are interesting informational issues in the economics of transition that we are ignoring (see for instance Caplin and Leahy 1993).

At $t = 1$, the value of searching in a sector includes the value of the possibility of staying there at $t = 2$, discounted by β, and the value of being unemployed multiplied by the probability of ending up unemployed in period 1:

$$V_{x,1} = \min\{\tfrac{K}{S_{x,1}}, 1\}(w_{x,1} + \beta \max\{w_{x,2}, V_{y,2}\}) + (1 - \min\{\tfrac{K}{S_{x,1}}, 1\})\beta \max\{V_{x,2}, V_{y,2}\}$$

and

$$V_{y,1} = \min\{\tfrac{K}{S_{y,1}}, 1\}(w_{y,1} + \beta \max\{w_{y,2}, V_{x,2}\}) + (1 - \min\{\tfrac{K}{S_{x,1}}, 1\})\beta \max\{V_{x,2}, V_{y,2}\} \tag{3.7}$$

Equilibrium.

An equilibrium for this economy, in terms of search decisions, wages, employment and profits can be obtained, for given sequences of policy parameters τ_1, $L_{b,1}$, τ_2 and $L_{b,2}$. Depending on parameter values, there are several possible scenarios, regarding whether workers will be moving initially to both sectors or just one, etc. Since **the** purpose **of this paper is not to analyze a model of transitional unem-**ployment in detail, we refer the reader to Gavin (1993) and references there. We proceed to provide one example, where parameter values are such that a "sequential" reform strategy is the most desirable policy, and we show how some political environments make that sequence unfeasible, inducing a second best "big bang" as the best feasible strategy. We will use parameter values that induce interior solutions so that, in equilibrium,

$$V_{x,2} = V_{y,2} \tag{3.8}$$

and

$$V_{x,1} = V_{y,1}. \tag{3.9}$$

Since agents spend all their income in importable goods, aggregate real income of workers (I_l), of exporters (I_x), and of owners of the importable firms (I_y) is given, respectively, by the total payroll, the profits in the exports sector, and the profits in the importables sector, deflated by the price of importables (1 + τ):

$$I_{l,t} = \frac{w_{x,t}L_{x,t} + w_{y,t}L_{y,t} + w_{b,t}L_{b,t}}{1 + \tau_t}$$

$$I_{x,t} = \frac{X_t - w_{x,t}L_{x,t}}{1 + \tau_t}$$

$$I_{y,t} = \frac{(1 + \tau_t)Y_t - w_{y,t}L_{y,t}}{1 + \tau_t}. \tag{3.10}$$

Equation (3.10) presents pre-tax income. Let the term T represent lump-sum taxes to cover the (real) fiscal deficit. The deficit will equal expenditure on bureaucratic wages minus tariff revenue. To simplify the exposition, we ignore intertemporal balance of payment issues and assume that imports equal exports (equal production of exportables X) at all times. Hence,

$$T_t = -\frac{\tau_t}{1 + \tau_t}X_t + \frac{w_{b,t}L_{b,t}}{1 + \tau_t}. \tag{3.11}$$

It is straightforward to verify that:

$$I_{l,t} + I_{x,t} + I_{y,t} \quad T_t = X_t + Y_t$$

Let $I_t \equiv I_{l,t} + I_{x,t} + I_{y,t} - T_t$. This represents the total consumption of importables by the economy (and total production evaluated at international prices).

There is a reformist government who intends to pass a trade reform and a fiscal reform, leading the tariffs and the level of superfluous employment in the public sector to zero. We want to show that there are circumstances in which a radical reform strategy will be pursued in lieu of a gradualist strategy, even if it entails lower aggregate payoffs due to the congestion externality in the labor market.

We are going to further assume that, in the initial situation, the distortions in the economy are given by τ_0 = 0.30 and $L_{b,0}$ = 0.20, and there is no unemployment. The value of K (the capacity of absorption of new labor by any sector in a given period) is fixed at 0.13.

The following are the **institutional rules:**

(a) The government is the agenda-setter. During period 1, it can propose contemporaneous changes in τ_1 and $L_{b,1}$. During period 2, it can propose contemporaneous changes in τ_2 and $L_{b,2}$. We assume for simplicity that $\tau_t \in \{0, 0.30\}$, and $L_{b,t} \in \{0, 0.20\}$.

(b) Each group of agents (workers, producers of importables, and exporters) has the power to block any policy initiative. In case of blockage, the resulting outcome is the status quo. As political agents, producers of importables and **exporters seek to maximize profits in their respective sectors. As political** agents, workers seek to maximize aggregate payments to labor.

(c) Workers receive as lump-sum taxes or transfers any possible fiscal deficit or surplus.

(d) The objective of the government is to maximize aggregate income.

(e) There are no side payments.

Assumption (b) could be replaced by some form of majority voting, and the results of the exercise would stand unchanged under appropriate assumptions about the voting power of each group of agents.[7] Since after period zero workers will

[7]Even though not neccessary for our results, however, it is our view that policy-making at this frequency is (specially in Latin America) better modelled as the outcome of a (perhaps nested) pressure-group game, than as the outcome of a "western style" voting game. See also **footnote 5.**

have heterogeneous interests, the assumption of organized labor defending aggregate payments to labor could be improved upon but we do not find it necessary for the purposes of the present exposition. Assumption (c) is adopted for simplicity, and other forms of sharing the fiscal burden are compatible with the results.

Table 3.2 shows aggregate stage payoffs (or payoffs per *period*) to the different groups under different scenarios. The initial situation is represented by column I in Table 3.2. Since we assume no initial ("excess") unemployment, $L_{x,0} + L_{y,0} = 1 - L_{b,0} = 0.8$. From (3.3) and $w_{x,0} = w_{y,0}$ we obtain another equation for $L_{x,0}$ and $L_{y,0}$, $L_{y,0} = (1 + \lambda_0)^2 L_{x,0}$, and the values given in Table 3.2 follow. The last column shows a steady state in which all distortions have been removed (IV, L_b and τ are set to be equal to zero) and there is no unemployment, so, again, wages are equalized. This column shows the maximum possible value of the level of aggregate income (I).

One possible way to get to the non distorted situation is to eliminate in the first period the distortion caused by bureaucratic employment, and in the second period the distortion caused by the tariff. That is, $L_{b,1} = 0$, $\tau_1 = 0.3$ and $L_{b,2} = \tau_2 = 0$. We call this strategy gradualism. Supposing for a minute that no unemployment arises during a gradualist process, then (3.9) and (3.8) imply that wages are equalized each period. Hence $L_{x,1}+L_{y,1} = 1$ and, using (3.3), $L_{y,1} = (1+\lambda_1)^2 L_{x,1} = (1.3)^2 L_{x,1}$. From there, we obtain the values for $L_{x,1}$ and $L_{y,1}$ given in column II (transition in gradual reform). It is simple to verify that in neither period the movements of labor required in each sector violate the constraint given by $K = 0.13$. Hence, gradualism do not require any unemployment, as postulated.[8]

The problem with gradualism is the following. Suppose that everybody agrees with the prescribed decisions in period 1. When period 2 arrives, producers of importable goods and workers will not find it convenient to support a move towards free trade any longer:[9] Vetoing any government proposal leads them to stay in the second column, where they are better off than under the last column (free trade). Gradualism is not a credible path to free trade because it is not politically sustainable.

Now consider the strategy of removing policy interventions as soon as it is possible. That is, in period 1 lower L_b and τ to zero. We will call this strategy *radical reform*. In that case, constraint (3.2) of labor absorption, will be binding

[8] This result is due to the fact that the capacity of absorption has been assumed to be very large. A more realistic model would show some unemployment during the gradualist process.

[9] In the case of workers it is due to the assumption that tariff revenue is redistributed to them.

	I	II	III	IV
τ	0.3	0.3	0.0	0.0
L_b	0.2	0.0	0.0	0.0
L_x	0.2974	0.3717	0.4274	0.5000
L_y	0.5026	0.6283	0.5545	0.5000
$I_l - T$	0.6900	0.7715	0.6992	0.7071
I_x	0.2098	0.2345	0.3269	0.3536
I_y	0.3545	0.3963	0.3723	0.3536
I	1.2543	1.4023	1.3984	1.4142

Table 3.2: STAGE Payoffs under different scenarios

in sector X (not in sector Y) in the first period. Hence, $L_{x,1} = L_{x,0} + K = 0.4274$. Notice that there is no unemployment in the final period, so that $V_{x,2} = V_{y,2}$ implies $w_{x,2} = w_{y,2} = 0.707$ (from $L_{x,2} = L_{y,2} = 0.5$ and $w = \frac{1}{2}L^{-1/2}$). Hence $V_{x,1} = V_{y,1}$ implies $\frac{K}{S_{x,1}}w_{x,1} = w_{y,1}$. From there, $L_{y,1} = L_{x,1}\left(\frac{S_{x,1}}{K}\right)^2 = \frac{0.4274}{(1.3)^2}S_{x,1}^2$. The number of searchers in sector X at the beginning of period 1 is given by: $S_{x,1} = 1 - L_{x,0} - L_{y,1}$ (the labor absorption constraint is not binding in sector Y). From the last two expressions, we obtain $S_{x,1} = 0.1481$ and $L_{y,1} = 0.5545$. To compute incomes in column **III (transition in radical reform), we** use $w_{x,1} = 0.7648$ and $w_{y,1} = 0.6715$.

A radical strategy entails a lower aggregate payoff than gradualism during period 1, and it implies that some workers will be unemployed (more generally, it **implies more unemployment than "economically" necessary).** However, **if adopted,** it is a politically sustainable path to the situation with no distortions. Notice that the aggregate payoff of producers of importables is larger during period 1 (column 111) than during period 2 (last column) if a radical reform strategy is pursued. This is due to the fact that, after bureaucracy is disbanded, some additional workers will flow temporarily into sector Y, to avoid the danger of ending up unemployed if they look for a job in sector X. However, in period 2, some workers leave Y and go to sector X. This additional employment temporarily offsets the **loss of the protection afforded to sector Y in period 0. Since no policy decision is** taken at the beginning of period 2 under a radical reform strategy, producers of importables have no way to avoid the loss of these temporary gains. Even though in the final situation producers of importables are slightly worse off than during the initial situation, they will be enticed to support the radical strategy due to their gains in period 1 for any discount factor β smaller than one (They gain

0.3723 − 0.3545 in period 1 and loose 0.3545 − 0.3535 in period 2).

Overall, a radical reform will imply a higher total payoff than a gradual reform strategy for any reasonably high discount factor: In period 1, the difference between the two paths is given by 1.4023 − 1.3984 in favor of gradualism, but since a gradual reform gets truncated and never arrives to the last column, in period 2 the difference is 1.4142 − 1.4023 in favor of a radical reform.

Another possible reform strategy we could call gradualism with *the wrong sequence* would be to start by removing trade distortions in period 1, reducing employment in the public sector in period 2. In the numerical example we have chosen, such strategy will be inferior to both gradualism and radical reform, because it keeps for one period the largest distortion, in this case, (excess) public employment. However, if the difference between the effects of the two distortions were not so important, it would be possible to have that an economically wrong sequence could make sense from a political-economic point of view if the "right" sequence were politically unsustainable, what illustrates our general point: political-economic considerations can revert purely economic results.

4. Some evidence

Poland. Perhaps the best example of radical reform is the one undertaken by Poland under Deputy Prime Minister Leszek Balcerowicz. Poland's strategy was to introduce economic liberalization, macroeconomic stabilization, and privatization as rapidly as possible. Substantial steps toward the first two objectives were given in a single package or "big bang" on January 1, 1990. Crucial decisions with respect to free trade, market pricing, end of state orders and central planning, key aspects of commercial law, large cuts in budget subsidies, higher tax collections, wage controls, and a sharp devaluation of the currency, occurred in the space of a few weeks at the end of 1989 and beginning of 1990 (Sachs 1992). A privatization law was put in place in June 1990. Since then, privatization has gone slowly in the case of the largest firms, but small and medium-sized businesses has been privatized with great success. Sachs (1992) characterizes the first two years as an end to inflation and shortages, a slight decline in average consumption, an increase in the quality and variety of goods available, and a sharp increase in the unemployment rate (Although he attributes the rise in unemployment at least partially to the breakdown of trade relations with the Soviet Union). Sachs considers that the consistency and boldness of the reforms may have eased the "valley of tears" unavoidable after a profound economic transformation. What is surprising is that an overwhelming proportion of the population supported the government in spite of the painful first months (Przeworski 1991, p.165, offers some evidence in this regard). It seems clear that a more paused stance would have hardly mustered as much political support as the radical program did during the launching of the program, even if later on political developments have been adverse to the proponents of the shock.

Bolivia. Another clear example of radical reform was the Bolivian package of August 1985. The stabilization program, destined to stop a skyrocketing hyperinflation, relied on exchange-rate unification, supported domestically by tight monetary and fiscal policies and externally by a significant debt alleviation. The program included or was followed by an abrupt liberalization of credit and goods markets and deregulation of the labor market. Most price controls and other intervention were dismantled and significant layoffs occurred in the public sector, particularly in the state mining enterprises (Morales 1991). The reforms were undertaken during the Paz-Estenssoro government. While the labor movement had been effective in vetoing previous reform plans, it was unsuccessful in organizing opposition to the Paz-Estenssoro reforms. The government obtained the support of the two main political parties, which facilitated the approval of the program by Congress.

Peru. On August 8, 1990, ten days after its inauguration, the newly elected President Fujimori departed from his campaign promises by producing a shock-treatment stabilization package, while announcing his intention to launch major economic reforms. Main components of the *paquetazo* were huge increases in prices of publicly provided goods and services and other measures destined to put an end to the fiscal origin of hyperinflationary monetary emission. During the following months, and particularly during March of 1991, rapid and extensive liberalization of foreign trade and the capital account, and reduction of public sector employment, were undertaken. Paredes (1991) argues that the simultaneous introduction of these reforms probably increased the short-term costs of the program in relation to a well-designed (i.e., piecemeal) stabilization program. He is particularly critical of the opening of the foreign trade before tax reform, needed to insure fiscal stability, was completed. Another example of the difficulties associated with the adoption of far-reaching reforms before stabilization is secure, were the difficulties of exporters and producers of importable goods in the face of an overvalued currency.

Fujimori's popularity declined immediately after he embraced a bitter-pill strategy, and has fluctuated ever since, following economic as well as political developments. However, the orientation of his economic program has remained widely accepted.

Argentina. Contrary to the case under Alfonsin, Argentina under Menem is a case of orthodox and synoptic path of economic liberalization (Armijo 1992). Stabilization was undertaken in March 1991 with the Convertibility Plan. An ambitious fiscal reform, including a significant reduction of public employment, allowed the government to double its real revenues from 1989 to 1991. On the trade front, the average tariff was reduced from 28% in 1985-8'7 to 15% in 1991-92. In the same period, the maximum import tariff fell from 55% to 22%, and the coverage of non-tariff barriers went from 32% to 8%. Deregulation was also pervasive: In 1991, one single piece of legislation (the possibly unconstitutional "Deregulation Act") cleaned out an entire range of limitations to free-market activities, such as regulations of professional activities, of transportation and telecommunications, of retail hours (stores used to be forbidden from operating on Sundays and Saturday afternoons), etc. But perhaps the most impressive record of the government is on the privatization issue. From 1992 on, privatization has proceeded at breakneck speed (Dornbusch 1992). Without much regard for price, the government has sold airlines, steel companies, part of the state petroleum exploitations, refineries, public services such as phone, water and electricity distribution in major cities and even military production facilities. The list for 1993 includes major savings institutions and other entities. Some of the costs of such a speedy process have been related to "learning by privatizing"(or, rather, the lack of it). Privatization of public utilities was implemented even before developing an adequate regulatory framework. Another major cost of simultaneous reforms is the current account deficit induced by an overvalued currency (fixed nominal exchange rate and positive, though very low by Argentine standards, inflation). In spite of all these difficulties (plus a few corruption and personal scandals) the Menem administration seems to be doing quite well in terms of popularity. In particular, the Finance Minister Domingo Cavallo (clear leader of the technocratic team) seems to have such a strong image that he is rumored to be a possible presidential candidate for the next elections.[10]

China. Most analysts consider China (a case of gradual reforms) a success. For instance, Murrell (1992, p.2-3), argues that "there can be no doubt that the reforms in China are as successful as have been seen." We view this as evidence in favor of our argument since Chinese authorities are by far less politically con-

[10] Update (1994): president Menem is successfully maneuvering to change the constitution to enable him to run for a second term.

strained than the other cases we describe, and hence were able to implement the "economic" first best .[11]

5. Conclusions

An understanding of the conditions under which political considerations induce biases toward radical reform is essential in order to evaluate recent experiences in Latin America and in terms of the design of new reform programs.

From a positive point of view, we provide an explanation for why Latin American countries that failed when implementing gradualist programs in the early 1980s, have been relatively successful in later undertaking more comprehensive attempts at reform. These attempts were somewhat surprising to outside economic analysts given the increased economic and administrative costs of such attempts in relation to more paused reform processes. A key element seems to have been the building of political support through a wider scope of the reform process. Thus, reform has been usually accompanied by political realignment. Since no sector of society wants to be first in renouncing to its apportionment of special privileges, reformist governments felt necessary to cut through the Gordian knot of government-created rents. By providing an explanation for this behavior, we have made some progress in answering the more general question of why political leaders in some countries have been able (and willing) to win popular support for market-based policies whereas interventionist programs still prevail in other countries.

From a normative point of view, our main insight is that even in circumstances in which economic reasoning indicates that reforms should be made sequentially, political considerations can make them "complementary". In implementing reform programs, policymakers have to be very aware of those considerations. This result, stands in contrast to Rodrik's (1989) recommendation of undertaking deep reforms with a narrow scope. On the other hand, we agree with Roger Douglas's (1990) reflections on the principles of politically successful structural reform, inspired by his experience as New Zealand's Finance Minister: "Large packages provide the flexibility to ensure that, losses suffered by any one group are offset by gains by

[11] For more comprehensive analysis of reform episodes, we refer the reader to the edited volumes Bates and Krueger (1993) and Haggard and Kaufman (1992). The concluding chapter of the latter provides a summary picture which is broadly compatible with the view that there are economic reasons for gradualism, but more "democratic" authorities may be forced to a radical approach (Argentina, Bolivia, Peru versus Chile, Korea, Taiwan).

the same group in other areas [...] It is uncertainty, not speed, that endangers structural reform programs." With respect to the role of international agencies promoting the use of markets in developing countries, it is clear that these agencies should carefully assess political restrictions when assisting countries undertaking liberalization processes. Optimistically, these institutions as well as international treaties might play a role as commitment devices to permit the implementation of reforms with lower transition costs. The perspective of the approbation of the NAFTA, for instance, might have played the role of a commitment device in the case of Mexico, allowing the government more flexibility in choosing the pace of reform.

Our model intends to portray the case of a country in a political deadlock about specific reform proposals that hurt strongly organized interests. Our prediction is that, in such cases, under relatively "democratic" conditions, only far reaching reforms accompanied by major political realignments have hope of success. Wei (1992) constructs a case (with ex-ante uncertainty and majority voting) where a gradualist approach is politically more sustainable. Clearly, we need a more general model in order to identify the conditions under which different sequencing strategies are optimal in a politico-economic sense; as well as a comprehensive set of case studies to fill in the cells of such a general model.

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FIGURE 1

payoffs: (Gov, Group f, Group t)